

## HEALTHY COMMUNITIES DATA AND INDICATORS PROJECT

**Short Title:** Violent Crime Rate

**Full Title:** Number of Violent Crimes per 1,000 Population

1. **Healthy Community Framework:** Social relationships that are supportive and respectful
2. **What is our aspirational goal:** Safe communities, free of crime and violence
3. **Why is this important to health?**

### Description of significance and health connection

Safe neighborhoods that are free of crime and violence are an integral component of healthy neighborhoods. Injuries – both physical and mental – from violence and crime contribute greatly to the overall burden of disease and death. Violent crimes disproportionately affect communities of color and young adults. Post-traumatic stress in victims, families, and community members add significantly to mental health problems and are risk factors for chronic illnesses like cardiovascular disease. In addition to direct physical and mental impacts, fear of crime and violence inhibit the use of community assets and social interaction that promote health. These include stifling opportunities for physical exercise at nearby parks and playgrounds, or walking or bicycling as a way to commute to local destinations for basic needs. Furthermore, violence contributes to negative perceptions of neighborhoods and impacts real estate, housing, and economic development.<sup>1,2</sup>

### Summary of evidence

Ten percent of all deaths in young California adults aged 15-44 years are related to assault and homicide. In 2013, California law enforcement agencies reported 1,745 murders, 7,454 rapes, and over 88,785 aggravated assaults. African Americans in California are 9 times more likely to die of assault and homicide than Whites.<sup>3</sup>

### References:

1. Fowler PJ et al. Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Dev Psychopathol* 2009; 21(1):227-259.
2. Takagi D, Ken'ichi I, Kawachi I. Neighborhood social capital and crime victimization: Comparison of spatial regression analysis. *Soc Sci Med* 2012; 75(10): 1895-902.
3. EpiCenter: California Injury Data Online. Assault/Homicide. Sacramento, CA: California Department of Public Health.  
<http://epicenter.cdph.ca.gov/ReportMenus/InjuryDataByTopic.aspx>, Accessed on October 30<sup>th</sup> 2015.

4. **What is the indicator?**

Detailed Definition: Number of violent crimes per 1,000 residents

- Stratification: Race/ethnicity stratification not available

### Data Description

- Data source: Federal Bureau of Investigation (FBI), Uniform Crime Reports (UCR) (<http://www.fbi.gov/about-us/cjis/ucr/ucr>), Crime by County files obtained by request to [CRIMESTATSINFO@ic.fbi.gov](mailto:CRIMESTATSINFO@ic.fbi.gov). California data can also be obtained from the

Department of Justice Criminal Justice Profiles (<https://oag.ca.gov/crime/cjisc/criminal-justice-profiles>).

- Years available: 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
- Updated: Annually
- Geographies available: City/towns, counties, regions, state

The Uniform Crime Reports is a nationwide, cooperative statistical effort of nearly 18,000 city, university and college, county, state, tribal, and federal law enforcement agencies that voluntarily report data on crimes discovered by police and those reported to the police by the general public. The FBI compiles these reports in a standard format annually. Four types of major crimes fall into the category of violent crimes: 1) murder and non-negligent manslaughter, 2) forcible rape, 3) robbery, 4) aggravated assault. These tend to be more reliably reported than other less serious crimes, but underreporting has been well documented. The Crime by County text files that include violent crimes by agency and by county were requested directly to the FBI for the period 2000 to 2013. The violent crime rate was calculated by dividing the number of violent crimes by the total population (as reported by the FBI) and multiplying by 1,000. Standard errors were calculated using the Poisson distribution and were used to compute 95% confidence intervals. Relative standard errors (to assess statistical reliability) were computed by dividing the standard error by the violent crime rate. Cities and towns were assigned a 5-digit U.S. Census place code and a county code by matching agency code in the UCR file to the Law Enforcement Agency Identifiers Crosswalk (United States Department of Justice. Office of Justice Programs. Bureau of Justice Statistics. Law Enforcement Agency Identifiers Crosswalk, 2012. ICPSR35158-v1. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2015-04-17). Other agencies were also assigned a 5-digit county code. The number of violent crimes and population reported by cities and other law enforcement agencies within the county (sheriff, tribal, university, etc.) were aggregated to obtain county rates. County data were aggregated conforming to the metropolitan planning organizations (MPO) regions as reported in the *2010 California Regional Progress Report* (<http://www.dot.ca.gov/hq/tpp/offices/orip/Collaborative%20Planning/Files/CARegionalProgress2-1-2011.pdf>) to obtain regional rates.

## 5. Limitations

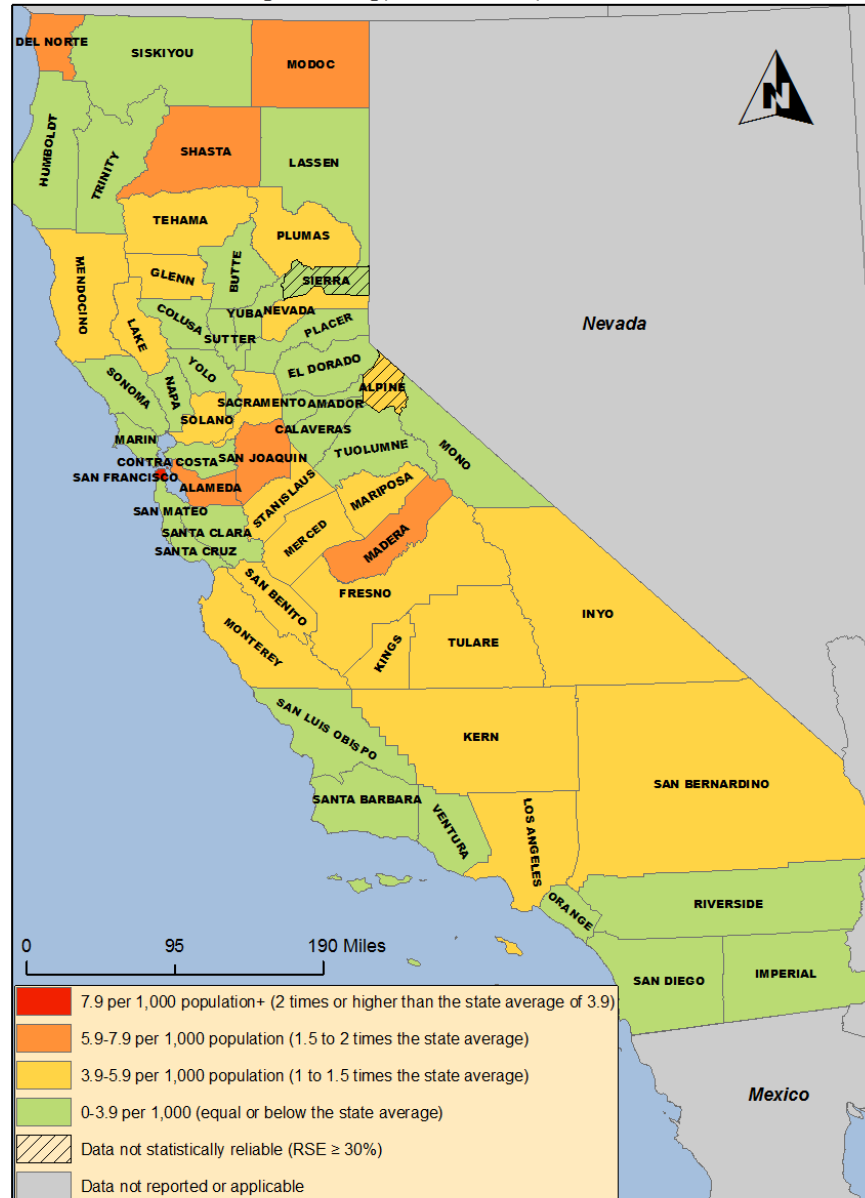
Crime data are based on incidents that are reported to law enforcement agencies. Limitations in the use of these data are detailed at <http://www.fbi.gov/about-us/cjis/ucr/ucr-statistics-their-proper-use>. Because some crimes such as sexual assaults are underreported, crime data are not always accurate. Even with underreporting, it still may be possible to observe trends over time if reporting biases hold steady within a jurisdiction. An alternative would be to use injury rates from assaults treated in emergency departments. This measure has the advantage of being less susceptible to reporting biases, and can provide information at zip code geographies and for different race/ethnicity groups. However, this alternative provides information on where the victim resides rather than where the assault occurred and it will only capture serious injuries that require medical care. The UCR definition of forcible rape was changed in 2013 to include "Penetration, no matter how slight, of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim," therefore care should be exercised when comparing the data with future UCR releases.

## 6. Projects using this indicator

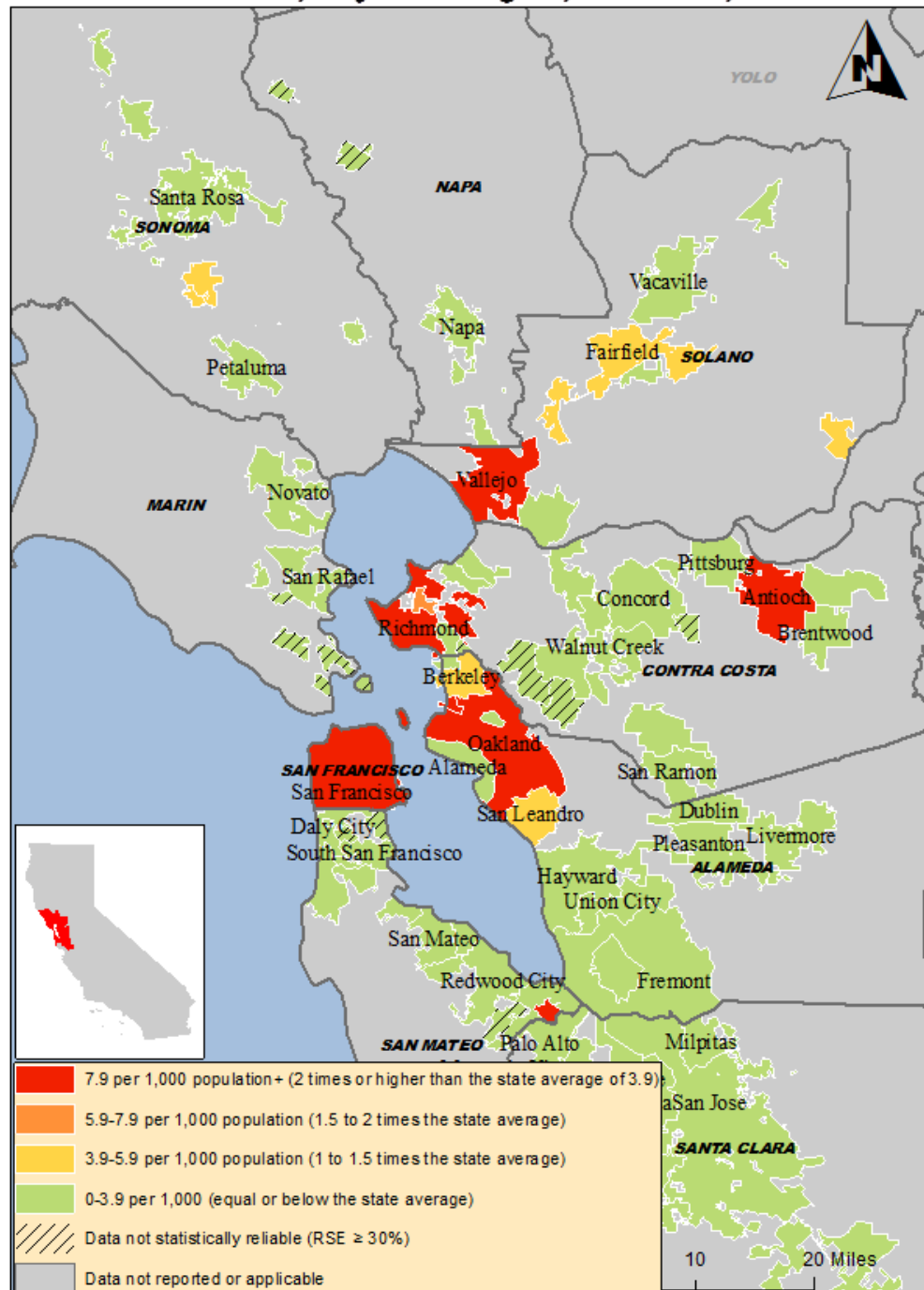
1. Baltimore Neighborhood Indicators Alliance (<http://www.bnaiifi.org>)
2. San Francisco Department of Public Health's Sustainable Communities Index (<http://www.sustainablecommunitiesindex.org/>)

## 7. Examples of Maps, Figures, and Tables

**Map 1: Number of Violent Crimes per 1,000 Population by County, California, 2013**



**Map 2: Number of Violent Crimes per 1,000 Population, Cities and Towns, Bay Area Region, California, 2013**



Source: Federal Bureau of Investigations, Uniform Crime Reports.

Analysis by CDPH.

**Table 1. Number (N) of Violent Crimes per 1000 Population, by City/Town, Sonoma County, 2009-2013**

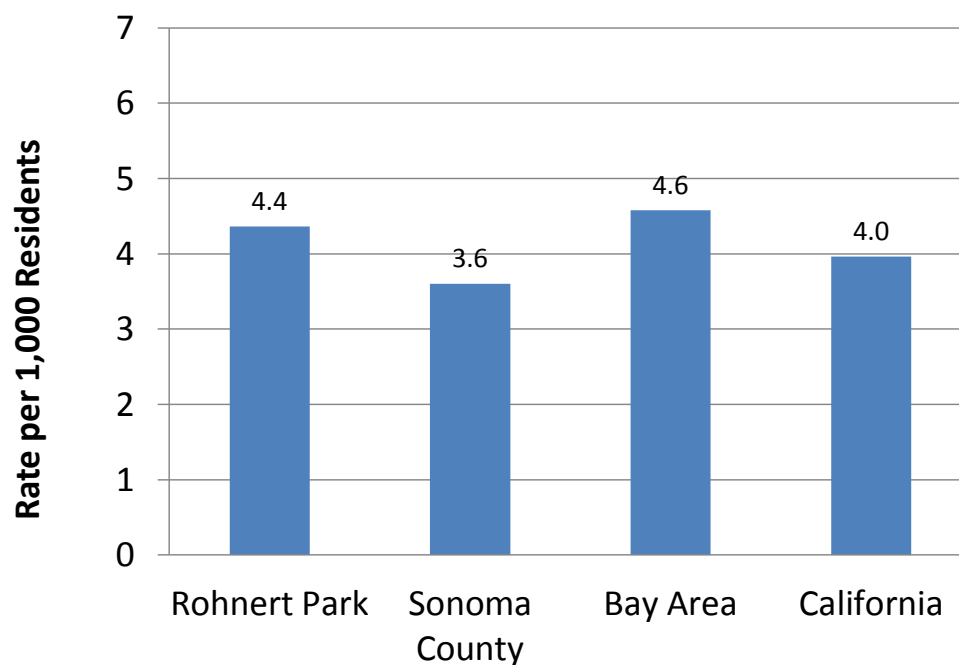
City/Town	2009			2010			2011			2012			2013		
	N	Pop.	Rate	N	Pop.	Rate	N	Pop.	Rate	N	Pop.	Rate	N	Pop.	Rate
Cloverdale	16	8,304	1.9	19	8,618	2.2	11	8,719	1.3*	6	8,775	0.7*	5	8,718	0.6*
Cotati	32	7,248	4.4	35	7,265	4.8	35	7,350	4.8	54	7,398	7.3	35	7,388	4.7
Healdsburg	16	10,968	1.5	16	11,254	1.4	14	11,386	1.2	18	11,458	1.6	25	11,483	2.2
Petaluma	168	54,649	3.1	197	57,941	3.4	140	58,622	2.4	167	58,995	2.8	179	59,224	3.0
Rohnert Park	201	40,401	5.0	164	40,971	4.0	193	41,453	4.7	192	41,716	4.6	180	41,326	4.4
Santa Rosa	803	156,541	5.1	767	167,815	4.6	682	169,788	4.0	636	170,862	3.7	541	171,564	3.2
Sebastopol	15	7,487	2.0	17	7,379	2.3	8	7,466	1.1*	8	7,512	1.1*	23	7,570	3.0
Sonoma	25	9,955	2.5	33	10,648	3.1	32	10,773	3.0	27	10,841	2.5	38	10,912	3.5
Windsor	80	25,634	3.1	38	26,801	1.4	65	27,116	2.4	67	27,293	2.5	105	27,249	3.9
Sonoma Co.	1,917	465,831	4.1	1,876	483,878	3.9	1,702	489,566	3.5	1,792	492,642	3.6	1,782	494,862	3.6
Bay Area	33,605	7,029,014	4.8	31,976	7,129,560	4.5	30,775	7,213,374	4.3	33,435	7,288,648	4.6	33,828	7,380,780	4.6

Note: Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault

Data Source: Federal Bureau of Investigation: Uniform Crime Reports

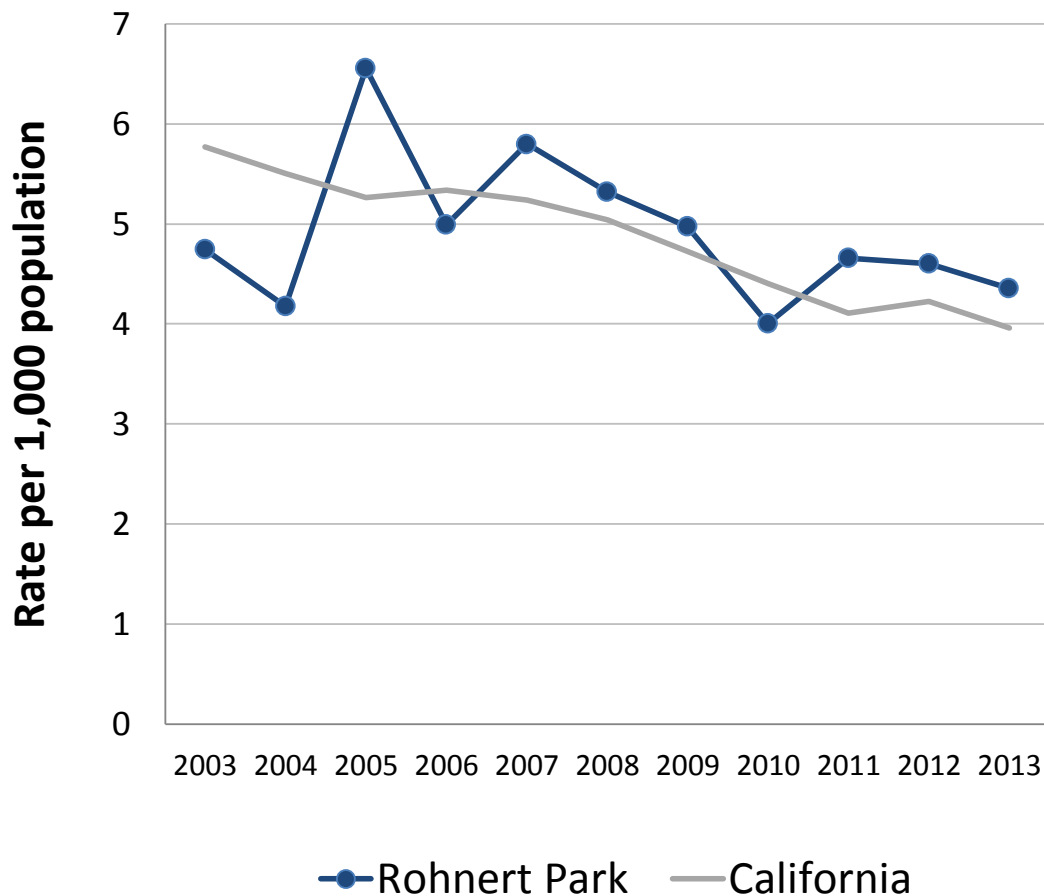
\* Not statistically reliable (Relative Standard Error > 30%)

**Figure 1. Number of Violent Crimes per 1,000 Population, Rohnert Park, Sonoma County, Bay Area, California, 2013**



Data Source: Federal Bureau of Investigation, Uniform Crime Reports.  
Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault

**Figure 2. Number of Violent Crimes  
per 1,000 population, Rohnert Park, California, 2003-2013**



Data Source: Federal Bureau of Investigation, Uniform Crime Reports.  
Violent crime includes murder and non-negligent manslaughter, forcible rape, robbery,  
and aggravated assault